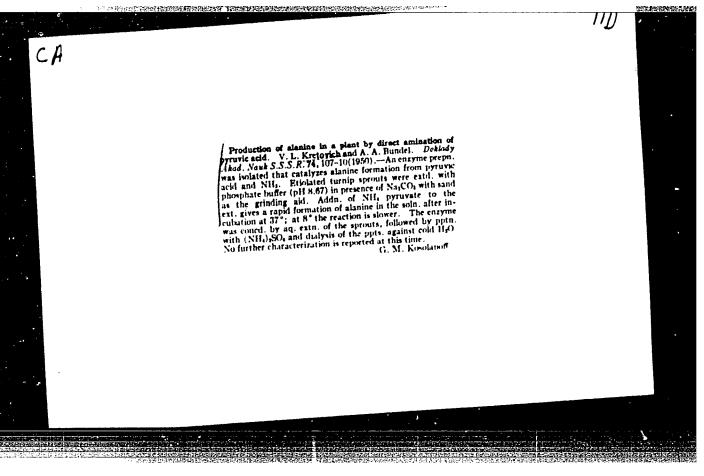
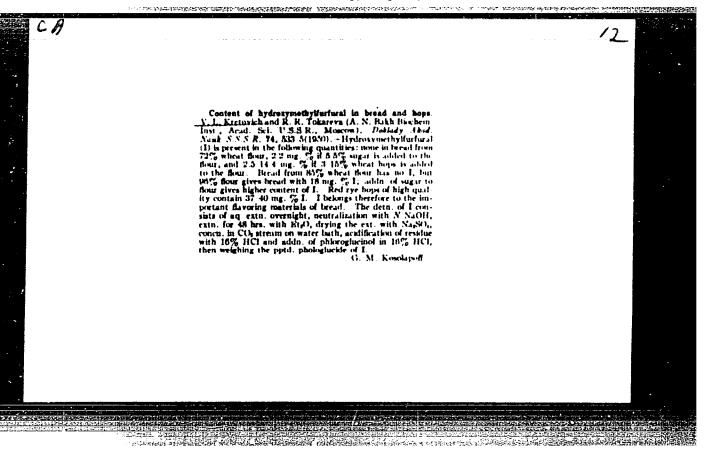
"APPROVED FOR RELEASE: Monday, July 31, 2000

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"APPROVED FOR RELEASE: Monday, July 31, 2000

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Storage of grain. TRYACTYATSKIY, L. A., Fod. red. V. L. Kretovicha, 2 izd, Toskva, Gos. izd-vo tekh n. i ekon. lit-ry to voprosam angotovk, 1951.

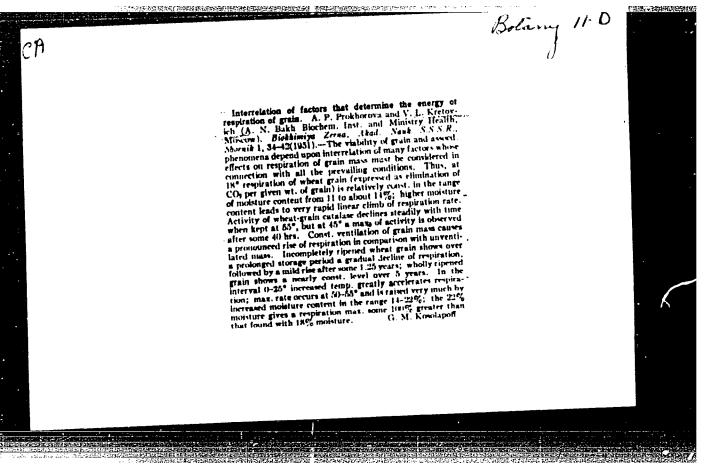
9. Monthly List of Russian Accessions, Library of Congress, June 1952 1953, Uncl.

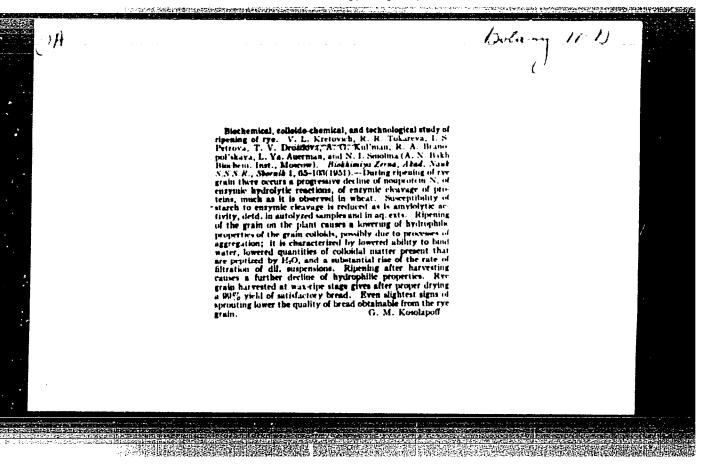
- 1. KRETOVICH, V. L., EUNDEL', A. A. and USPENSKAYA, ZH. V.
- 2. USSR (600)
- 4. Amino Acids
- 7. Transformation of dicarboxylic amino acids in the sprouting and maturing of grain. Biokhim.zerna No. 1, 1951.

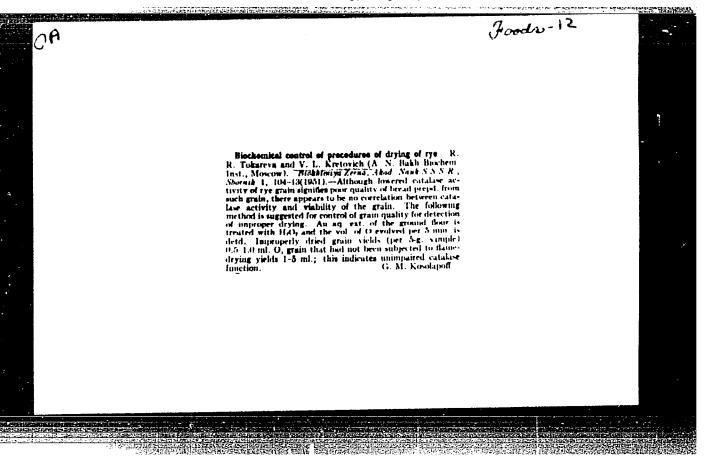
9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

"APPROVED FOR RELEASE: Monday, July 31, 2000

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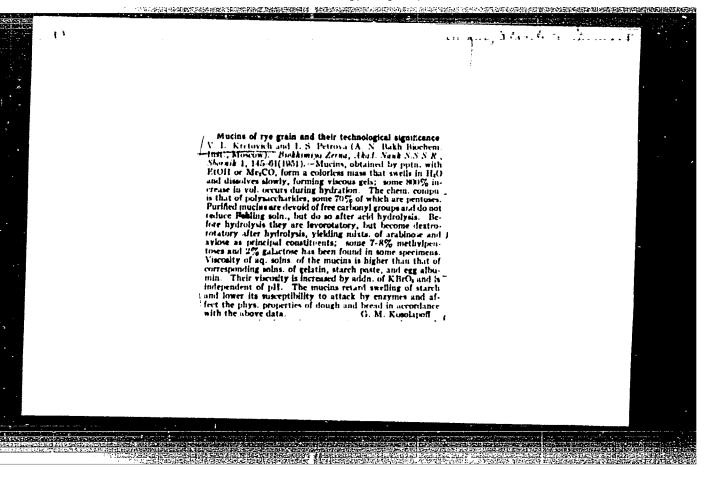






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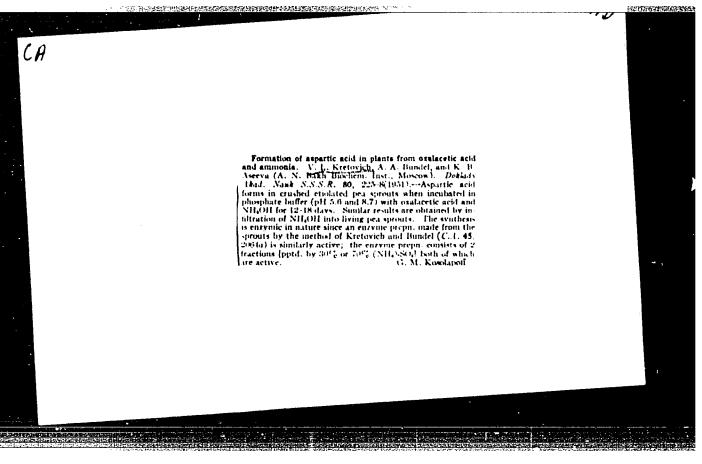
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PROMIOROVA, A.P.; KRETOVICH, V.L.

The Postharvest Ripening as a Factor of Energy in Grain Respiration

Dok AN SSSR, Vol 80, No 1, 1 Sep 51, p. 77



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KRETOVICH, V. L.

USSR/Chemistry - Analytical

21 Sep 51

"Quantitative Chromatographic Determination of Volatile Aliphatic Acids," V. L. Kretovich, T. V. Drozdova, I. S. Petrova, All-Union Inst Bread-Baking Ind, Min of Food Ind USSR, and Inst of Biochem imeni Bakh, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol LXXX, No 3, pp 409-412

Butyric, acetic and formic acids were lst identified qualitatively in an adsorption column prepd in the laboratory, and then the acids were quantitatively removed from the column and titrated. The method is applicable to food products and was used for the detn of the above acids in rye bread and malt.

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R0008264200

DUBININ, M.M., akademik, otvetstvennyy redaktor; GAPON, Ye.N.; GAPON, T.B.;

ZHYPAKHINA, Ye.S.; RACHINSKIY, V.V.; BELEN'KAYA, I.M.; SHUVAEVA, G.M.;

ROGINSKIY, S.Z.; YANOVSKIY, N.I.; FUES, N.A.; KISELEV, A.V.; NEYMARK, I.Ye.;

SLINYAKOVA, I.B.; KHATSET, F.I.; LOSEV; I.P.; TROSTYANSKAYA, Ye.B.;

TEVLINA, A.S.; DAYANKOV, A.B.; SALDADZE, K.M.; BRUMBERG, Ye.M.; ZHIDKOVA,

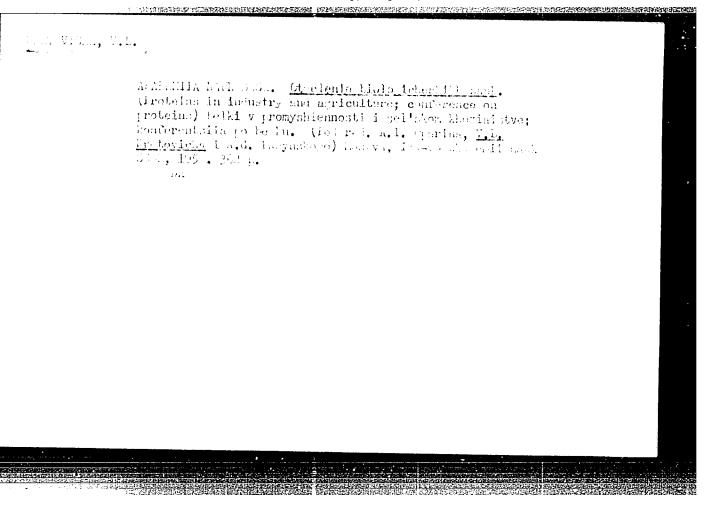
Z.V.; VEDENEEVA, N.Ye.; NAPOL'SKIY, S.A.; MIKHAYLOVA, Ye.A.; KAZANSKIY, B.A.;

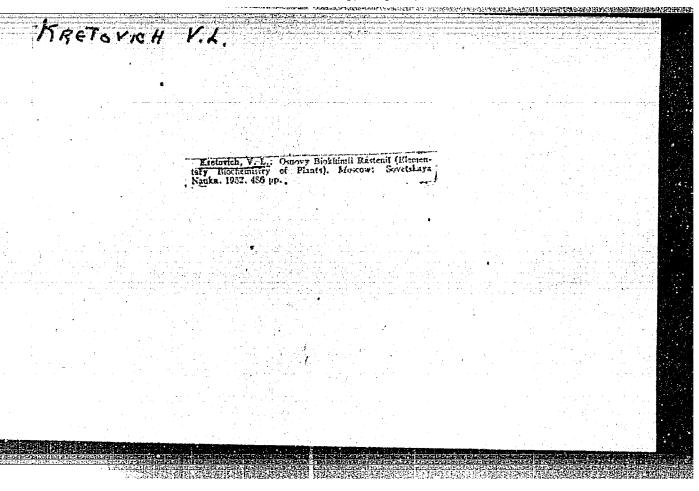
RYABCHIKOV, D.I.; SHEMYAKIN, F.M.; KRETOVICH, V.L.; BUNDEL', A.A.; SAVINOV,

B.G.; VENDT, V.P.; EPSHTEYN, YB.A.

[Research in the field of chromatography transactions of the All-Union Conference on Chromatography, November 21-24, 1950] Issledovania v oblasti khromatografii; trudy Vsesoiuznogo soveshchaniia po khromatografii, 21-24 noiabria 1950 g. Moskva, Izd-vo Akademii nauk SSSR, 1952. 225 p. (MLRA 6:5)

1. Akademiya nauk SSSR. Otdelenie khimicheskikh nauk.
(Chromatographic analysis)





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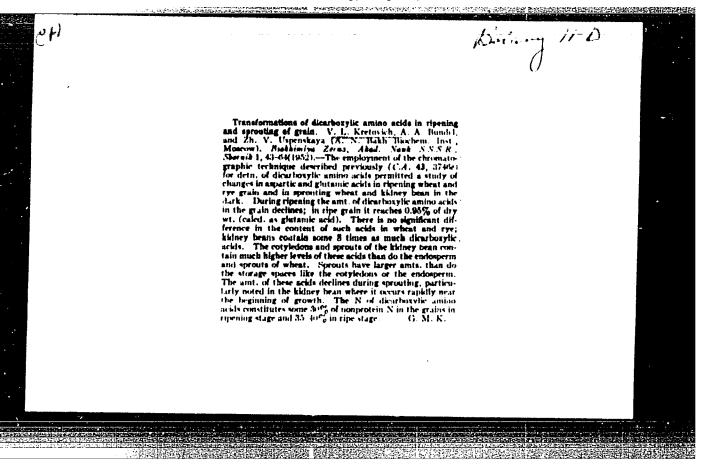
- 1. KRETOVICH, V. L TOKAREVA, R. R. PETROVA, I. S. DEOZDOVA, T. V. KUL'MAN, A. G. BRANOPOL'SKAYA, R. A. AUYERMAN, L. YA. SMOLINA, N. I.
- 2. USSR (600)
- 4. Wheat
- Biochemical, colloid-chemical, and technological studies of the maturing of wheat. Biokhim.zerna no. 1, 1952

· 对自己的证明,他们可以在他们的现在分词是是一个人的证明,但是是是是一个人的证明,

9. Monthly List of Russian Accessions, Library of Congress, March 1953, Unclassified.

"APPROVED FOR RELEASE: Monday, July 31, 2000

CIA-RDP86-00513R000826420



Prectical manual of plant biochemistry." Previous by V. L. Kretovich Blokhimia 17, No. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, June 1952 1953x Uncl.

OTARIM, A. I., Acad.; KPETCHICH, V. I.,

Grain

"Biochemistry of grain." Reviewed by N. I. Froskuryakov. Blokhimila, 17, No. 4, 1952.

9. Monthly List of Russian Accessions, Library of Congress, November 1952 1953, Uncl.

Visiting Teanovich, 1859-1922

Vladimir Ivanovich Falladin; 30th anniversary of his death. Vest. AN SSSR 21, No. 2, 1952.

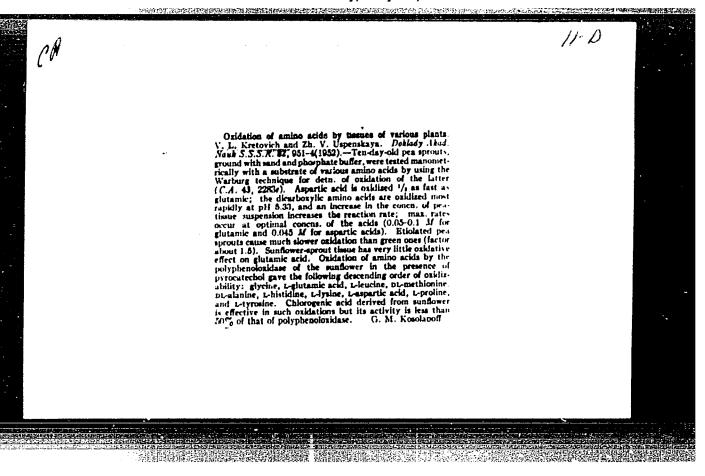
9. Monthly List of Russian Accessions, Library of Congress, July 1952 2858, Uncl.

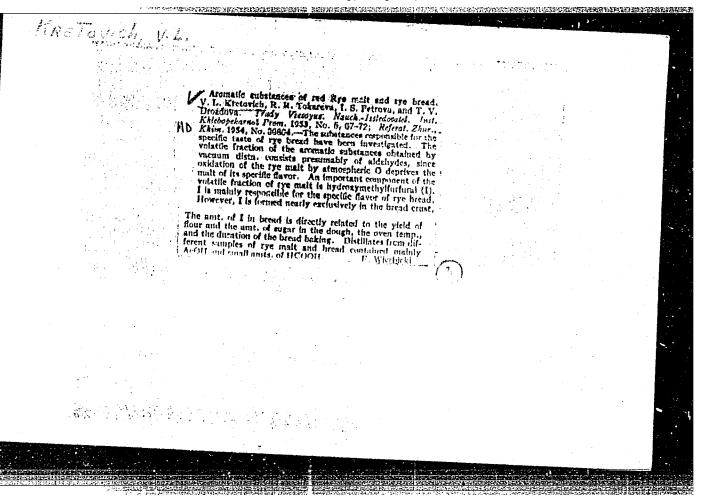
BUNDEL!, A.A.; ZHAMENSKAYA, M.P.; KHETOVICH, V.L.

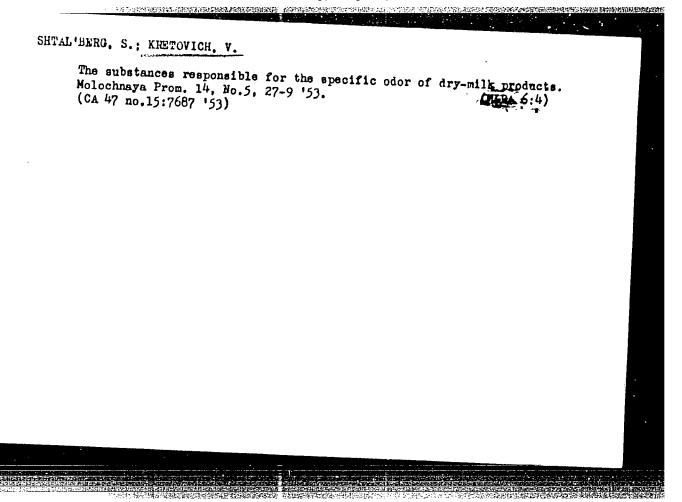
Formation of alanine by reserve plant proteins in the presence of ammonium pyroreacemic acid. Doklady Akad. nauk SSSR 82 no.1:109-112 1 Jan 52. (CIML 21:5)

1. Presented by Academician A.I. Oparin 2 November 1951.

2. Institute of Biochemistry imeni A.N. Bakh, Academy of Sciences USSR.





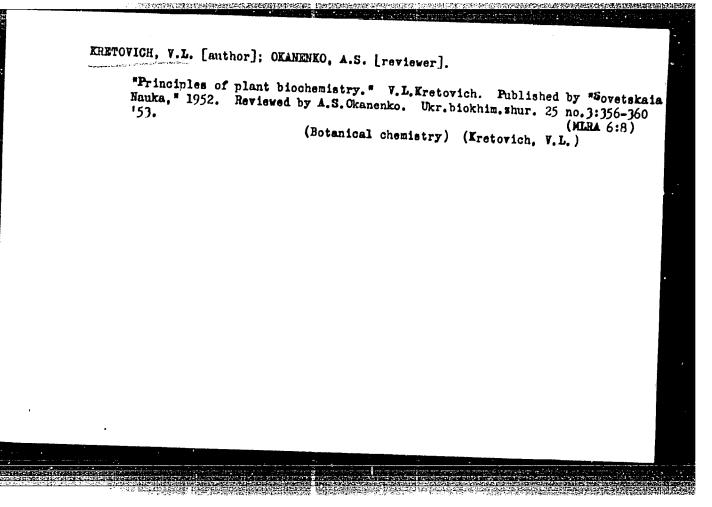


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KRETOVICH, V.L. [author]; PHONIN, S.I. [reviewer]; OPAHIN, A.I., akademik, redaktor.

*Principles of plant biochemistry.* Usp.khim, 22 no.7:890-892 J1 '53.

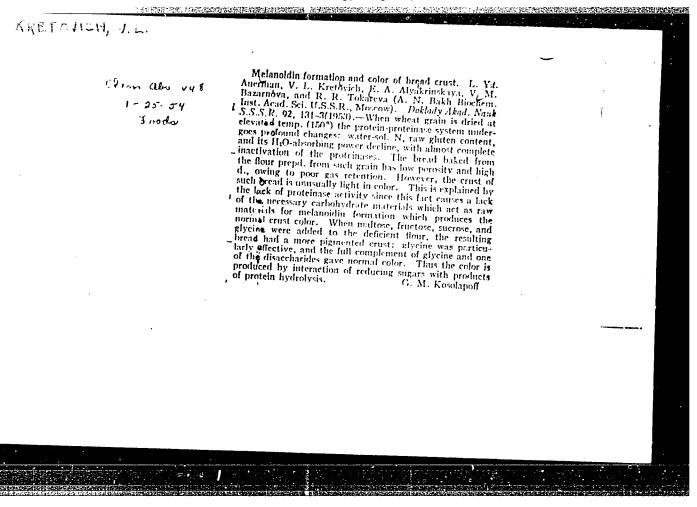
(MLEA 6:7)

(Biochemistry) (Kretovich, V.L.)
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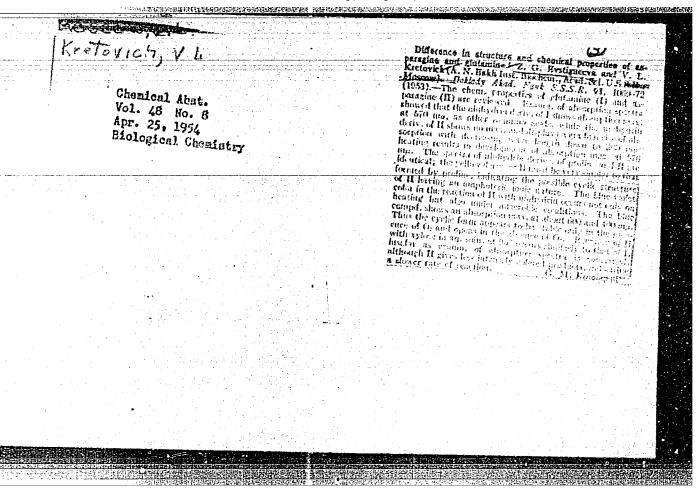
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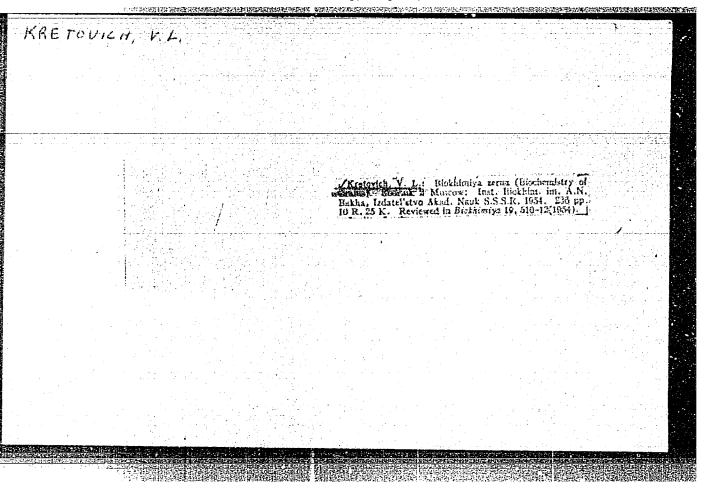


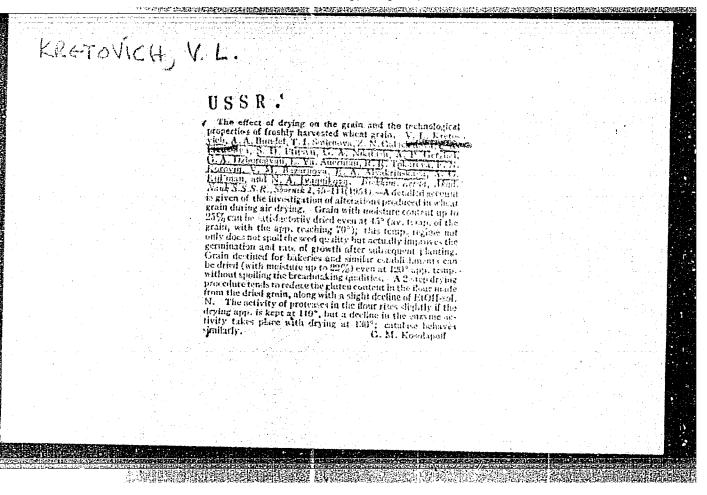
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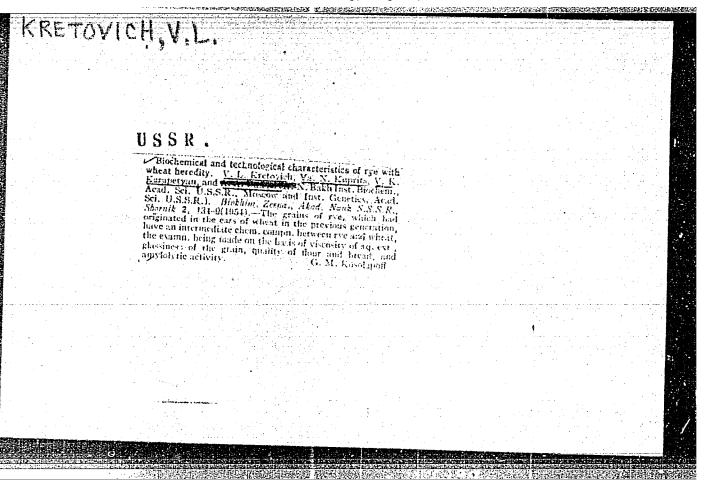
Synthesis of protein from asparagine and glutamine in wheat approach. V. L. Kretovich and Z. G. Evertigueeva cow). Dakindy slowd. Inst., Acad. Sci. U.S.S.R. (U.S.S.R. (U.S.R. (U.S.S.R. (

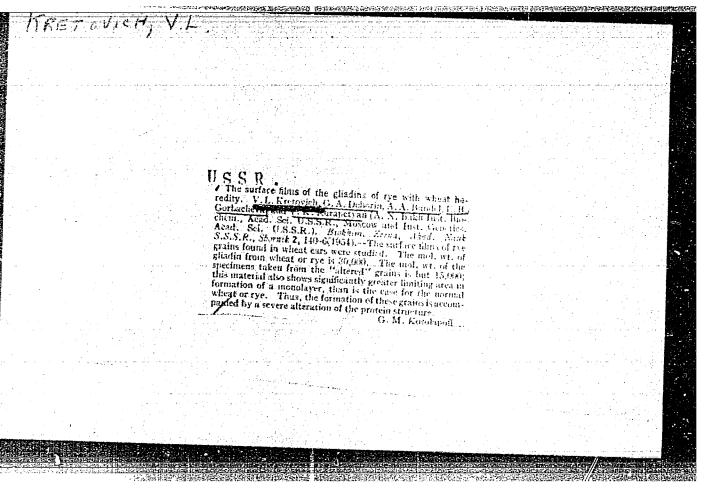


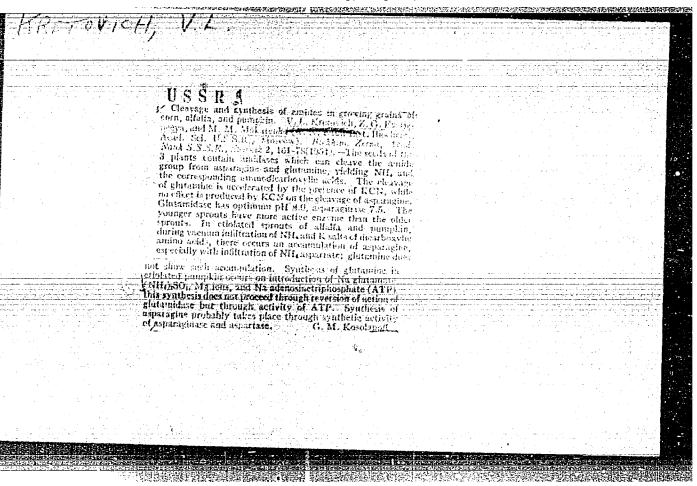
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Kretovich, V. L.	"Slements of the Siochem- isory of Plants" (Student manual)	Institute of Biochemistry Smeni A. L. Bakh, Acamery of Sciences 1858
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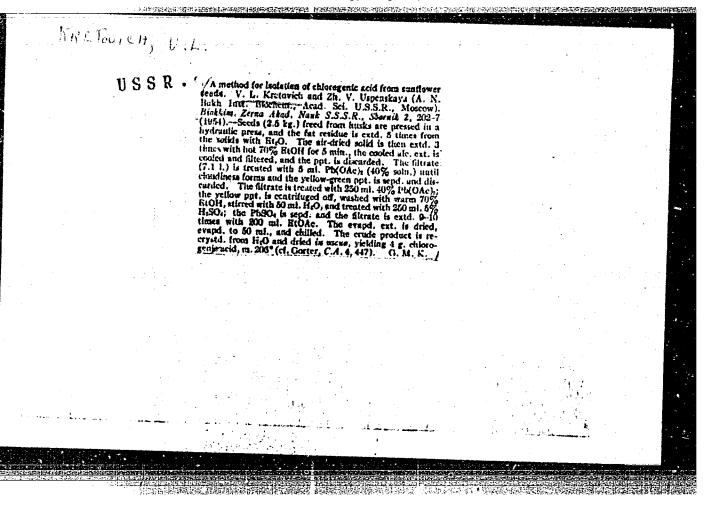








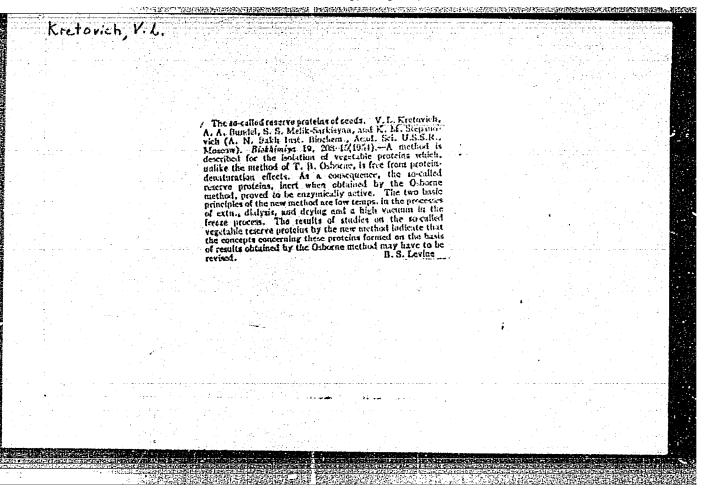




"APPROVED FOR RELEASE: Monday, July 31, 2000

CIA-RDP86-00513R000826420

KRETOUICH USSR/ Agriculture Card 1/1 : Pub. 124 - 12/24 Authors Kretovich, V. L., Dr. of Biol. Sc. 中国中华的民族,中国学生的大部分的大学的特别的 Title Rational methods of grain drying in grain driers Periodical: Vest. AN SSSR 11, 64-66, November 1954 **Abstract** The development of rational methods of grain drying, especially suitable for humid regions of the USSR (Ural, Northern Kazakhstan, Siberia), is Institution: Submitted

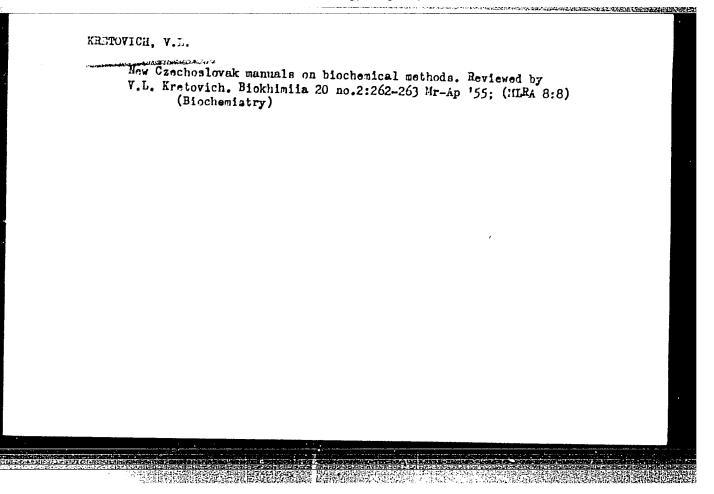


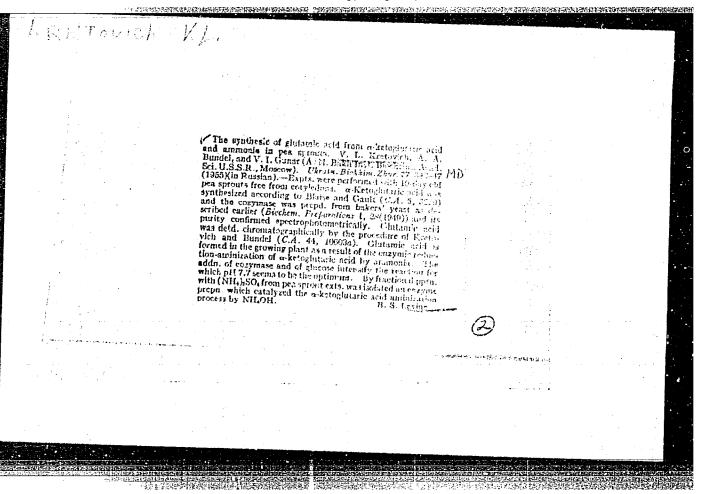
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KRETAVICH, V.L.

*Biochemistry of grain.* V.L.Kretovich, ed. Reviewed by

*B.D.Kazakov. Biokhimila 19 no.4:510-512 J1-Ag '54. (MIRA 7:9)

(Grain) (Kretovich, V.L.)
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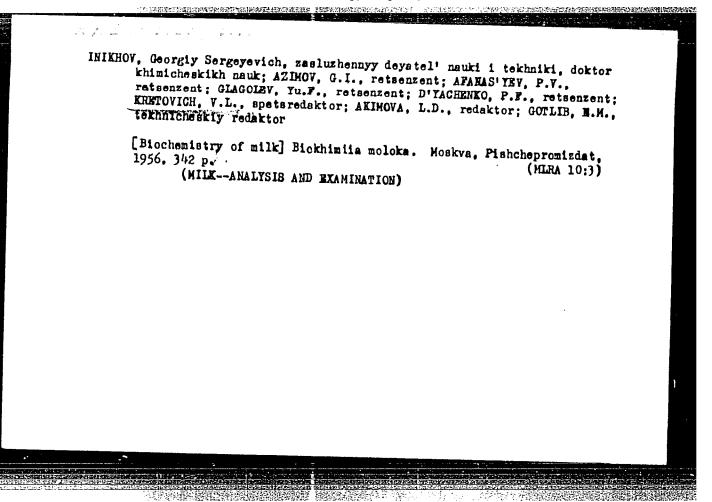




GOLIK, Mikhail Grigor'yevich, doktor sel'skokhozysystvennykh nau, professor;
KRRTOVICH, V.L., professor, doktor biologicheskikh nauk, redaktor;
GRI'MAN, D.TH., redaktor; GOLUBKOVA, L.A., tekhnichesky redaktor

[Storage of corn; scientific principles] Khranenie krkurusy; nauchnye
csnovy. Pod red. V.L.Kretovicha. Moskva, Ind-vo tekhn. i skon.
lit-ry po voprosam mukomol'no-krupianoi, kombikormovoi promyshl. i
elevatorno-skadskogo khoziaistva - Khleboisdat, 1956. 115 p.

(Gorn (Meize)--Storage) (MIRA 10:3)



KRETOVICH, Vatslav Leonovich; OPARIN, A.I., akademik, redaktor; USPENSKAYA, Zh.V., redaktor; POFRYADUKHIN, K.A., tekhnicheskiy redektor

[Fundamentals of the biochemistry of plants] Osnovy biokhinii rastenii. Pod red. A.I.Oparina. Izd. 2-oe. Moskva, Gos. izd-vo "Sovetskaia nauka," 1956. 497 p.

(Botanical chemistry)

(Botanical chemistry)

200

USSR/Physiology of Plants. Respiration and Metabolism.

I-3

Abs Jour: Ref. Zhur-Biologiya, No 1, 1958, 1137.

Author : Kretovich, V.L., Prokhorovz A.P. Inst

: Central Sci Res Laboratory of the Main Administration of

State Material Reserves.

: Respiration of Pea and Lentil Seeds. Title

Orig Pub: Biokhimiya Zerna, Moskva, Akad. Nauk SSSR, 1956, 171-178.

Abstract: In the Central Scientific Research Laboratory of the Main Administration of State Material Reserves the respiration intensity of pea and lentil seeds, measured according to the quantity of CO2 output, was determined for seeds of varying moisture content (14-18%) and at temperatures ranging from -2° to +3° and 17° -22.5°. The intensity of respiration rose with increased moisture content of the seed, reaching a maximum at between 16 and 18%, with the temperature between 180 and 21°. With very damp seeds increasing the temperature led to greater intensity of respiration.

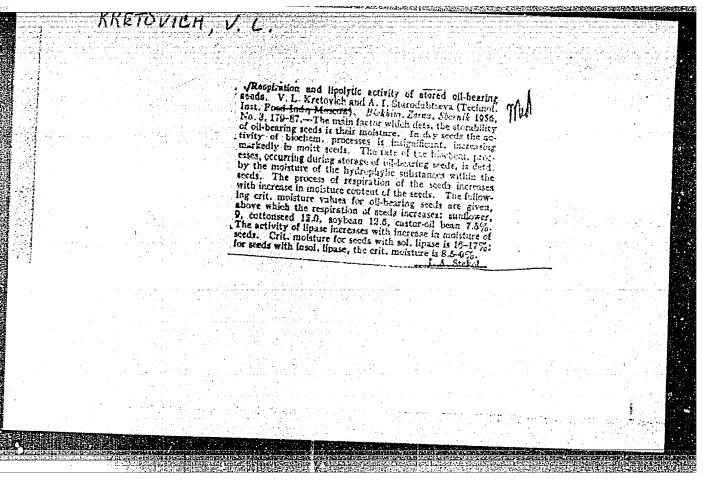
Card : 1/2

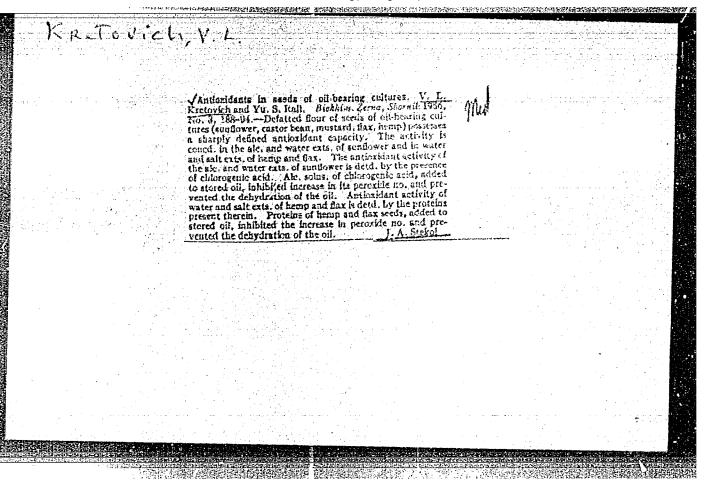
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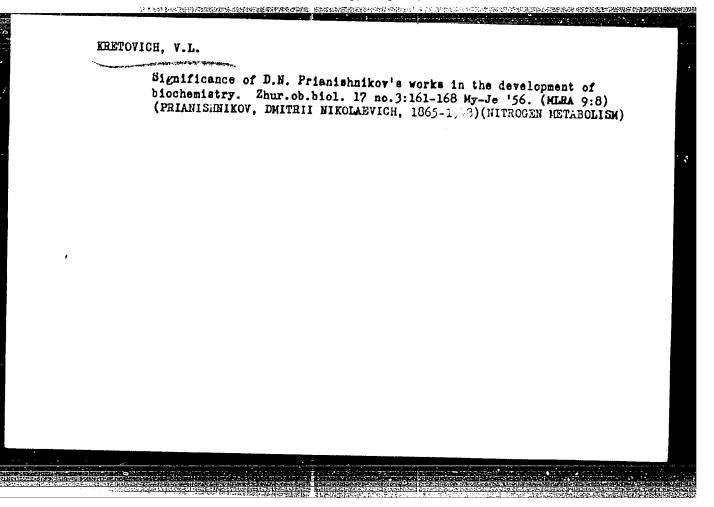
USSR/PhyARPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R0008 I-3

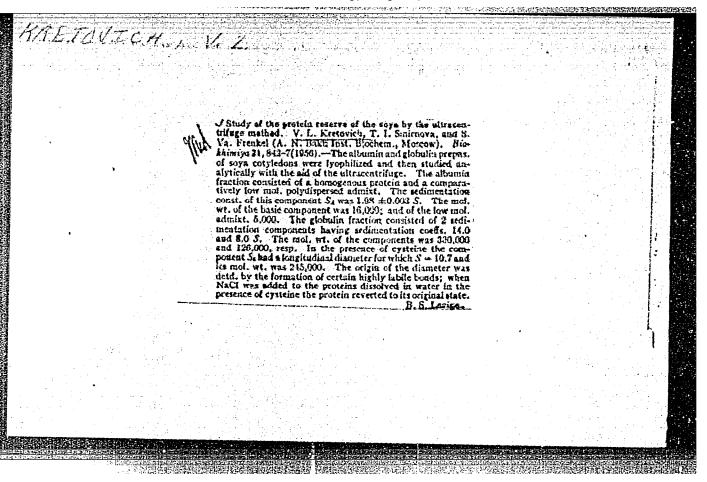
Abs Jour: Ref. Zhur-Biologiya, No 1, 1958, 1137.

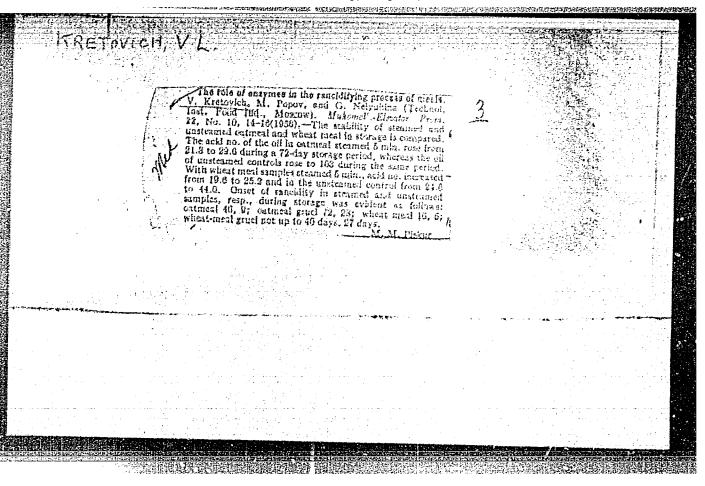
The respiration of these particular types of seed turned out to be from eight to ten times weaker than that of wheat seed. The loss in dry weight resulting from respiration was only in thousandths of a percent per year; it increased, however, with increase in temperature and moisture content of the seed.

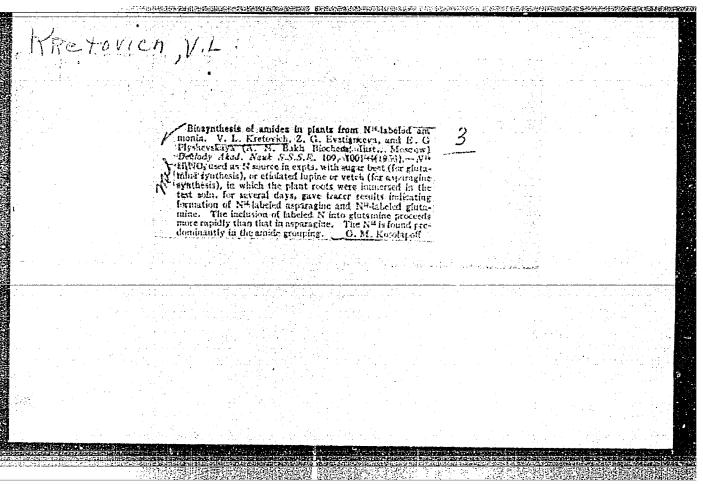


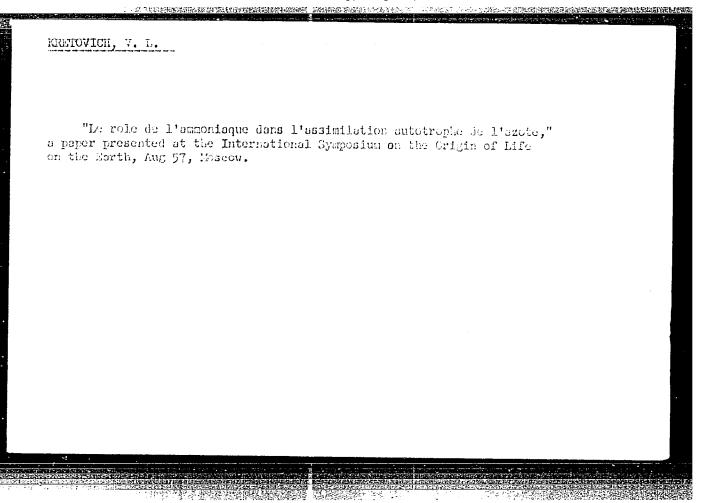












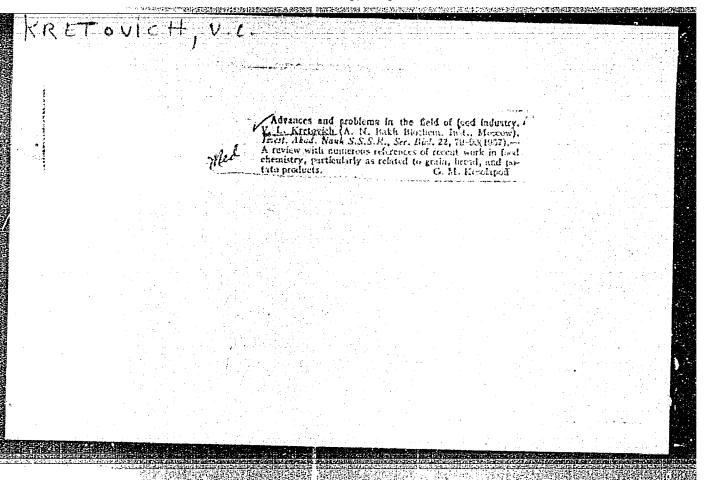
KRETOVICH, V. L.

(Inst. of Biochem, Acad. Sci. USSR)

"Enzamatic Synthesis of Glutamic Acid and Phenylalanine Plants,"

paper submitted at the 1957 International Symposium on shayme Chemistry held in Tokyo and Kyoto Japan, 15-23 Oct 57.

B-3,093,405 and C 3 C 8 509



Cridation and reduction as factors influencing the enzymatic activity of vegetable proteins [with summary in *Inglish]. Biokhimite 22 no.1/2: 102-110 Ja-F '57. (MIRA 10:7)

1. Institut biokhimiti im. A.N.Bakha Akademit nauk SSSR, Moskva. (PROTEINS,
eff. of exidation-reduction on fermentative activity of vegetable proteins (Rus))
(OXIDATION-REDUCTION, effects,
fermentative activity of vegetable proteins (Rus))

AUTHOR:

King Town My

Kretovich, V. L., Professor.

30-9-15/48

TITLE:

An International Conference on the Quality of Vegetable

(Mezhdunarodnyy kollokvium po kachestvu

Foodstuffs (Mezh rastitel'nogo pishchevogo syr'ya).

PERIODICAL. Vestnik AN SSSR, 1957, Vol. 27, Nr 9, pp. 85-88 (USSR).

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ABSTRACT:

The colloquy which was held two years ago in Geyzengeym (Heisenheim?) (FRG - Western Germany) decided to arrange for the next meeting in Paris. This second colloquy was presided over by Professor E. Terruan, the director of the French research center for vitamin problems. Professor G., Paris, reported on interesting investigations in the field of non-exchangeable amino acids in plants destined for human nourishment. The soviet delegation in its reports dealt with the problems of the biosynthesis of dicarbonic and aromatic amino acids in plant raw materials. A group of French researchers reported on the formation of amino acids in the leaves of succulents, on the combination of various plant diets for the purpose of improving the vegetarian food in Africa, on the new methods for determining the quality of oraganic and amino acids without a previous protein - hydrolysis. A special session was devoted to problems of the carotinoids, such as:

Card 1/2

30-9-15/48 An International Conference on the Quality of Vegetable Foodstuffs.

The evolutionary biochemistry of the carotinoids of the photosynthetic tissues, the development of the accumulation of β -carotene in plant foods, and others. The Soviet delegation visited the best known biochemical and agronomical laboratories as well as a number of excellently equipped scientific institutions of Paris. The members of the Soviet delegation were especially impressed by the truly amicable obligingness of their French colleagues.

AVAILABLE. Library of Congress:

Card 2/2

"APPROVED FOR RELEASE: Monday, July 31, 2000

CIA-RDP86-00513R000826420

POLYANOVSKIY, O.L.; KRETOVICH, V.L.

Quantitative determination and biosynthesis of tryptophan in plants. Dokl.AN SSSR 112 no.6:1086-1089 F '57. (MERA 10:5)

1.Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti.
Predstavleno akademikom A.I. Oparinym.

(Tryptophan) (Biosynthesis)

Knetonik, E.Z.

AUTHORS:

Dalenko, N.I., Kretovich, V. L.

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TITLE:

On the Direct Effect Produced by Reducing Agents upon Gluten Proteins (O neposredstvennom vozdeystvii vosstanoviteley na belki kleykoviny)

20-5-30/54

PERIODICAL:

Doklady Akademii Nauk SSSR, 1957, Vol. 115, Nr 5, pp. 961-963 (USSR)

ABSTRACT:

As is generally known, reducing agents, especially hydrosulphide compounds produce a loosening effect upon gluten. Yet
there is no uniform opinion concerning the nature of this
effect. Jorgensen developed the conception of the effective
mechanism of the so-called baking-powders, or of the therein
contained hydrosulphide compounds which activate the latent
"proteinases" of flour due to which the proteolysis is intensified and a "loosening" of both the gluten and the dough
is effected. This effect has also been proved experimentally,
whereas Ford and Maiden came to the conclusion that glutation
produces a direct effect on the gluten proteins. It is, however, quite obvious and evident that the dissolution of protein in 0,1 m acetic acid with a subsequent thorough heating

Card 1/4

20-5-30/54

On the Direct Effect Produced by Reducing Agents upon Gluten Proteins

at 95 to 96°C is a too drastic procedure which causes irreversible alterations of denaturization of the protein. Recently, the works by De Deken and collaborators, who had to prove the said direct influence, brought about the dissolution of "lysophilized" gluten at 0° by pH of up to 11 in the presence of reducing substances. Under these conditions too, the irreversible fission of protein by a "milieu" of such an alkaline extent is not impossible. The sulphurous amino acids are most easily affected in this respect. The present work was performed in view of an experimental investigation of this question. Its solubility both in water and phosphate buffer, as well as its plastic properties (measured by a plastometer AB) served as indices of the physical gluten properties. The effect of the reducing agents was investigated at O'C, this being a temperature at which the effect of proteolytic ferments seams impossible the results of the effect of the "Zystein" and of the "Askorbin"-acid upon the physical properties of the "lyophilisyized" gluten are given in fig. 1. This makes it clear that it seams impossible to determine the quality of the gluten by adding 0,1 to 0,001 M "Zystein" at 0°C. This is correlated with the fact that the gluten is quickly converted into a creamy substance. Only with the lowest "Zystein"-con-

Card 2/4

20-5-30/54

On the Direct Effect Produced by Reducing Agents upon Gluten Proteins

centration did they succeed in determining the quality of the gluten. At the same time it appears from fig. 1 that with all samples, except those to which "Zystein" was added, have been solidified.

It is thus quite obvious that "Zystin" has a direct effect upon gluten, its reaction being fillowed by radical changes of the gluten. The results of special tests of the same effect with different reaction of the "milieu" is given in table 2. Gluten subsequently lost all its plastic properties and was transformed into a glutinous substance independent of the reaction of the milieu. Without "Zystein" gluten solidified little by little, especially in an alkaline milieu. The results of the tests of the solubility of gluten - "lyophilizised" - or of the respective protein change. The solubility of "Zystein" is substantielly changed at 0°C. Contrary to the Jorgensen-Hypothesis, it is shown in table 4 that in the case of a joint effect of "Zystein" and "Bromate" (KBr) the quantity of nitrogen passing over into the solution increases with particular abruptness which was proved by the authors by a series of tests with unique results. If, therefore,

Card 3/4

20-5-30/54

On the Direct Effect Produced by Reducing Agents upon Gluten Proteins

"Zystein" involves a substantial bond re-grouping of the gluten proteins by causing a radical change of its condition and of the solubility of the protein, the "Bromate" intensifies the effect of the "Zystein" and acts in this respect as a sort of synergist. There are 4 tables and 2 Slavic references.

ASSOCIATION: Moscow Technological Institute of Food Industry

(Moskovskiy tekhnologicheskiy institut pishchevoy promyshlen-

nosti)

PRESENTED: by A.I. Oparin, Academician, May 21, 1957

SUBMITTED: May 16, 1957

AVAILABLE: Library of Congress

Card 4/4

tire crowie to U.L.

AUTHORS:

Kretovich, V. L., Yakovleva, V. I.

20-3-29/46

TITLE:

The Synthesis of Glutamic Acid From a-Krtogluturate in Plants. (Sintez glyutaminovoy kisloty is al'faketoglyutarata v rasteniyakh)

PERIODICAL:

Doklady AN SSSR, 1957, Vol. 116, Nr 3, pr.455-458 (JSSR)

ABSTRAUT:

Glutamic acid is one of themest movable metabolites in plants and plays a very important rôle in metabolism. Therefore the study of the ways and fermentative mechanisms of the biosynthesis and the convertion of this amino acid is of great interest. A fermentative system which cutalysis the formation of glutumic acid from ketoglutar acid (hereinafter abbreviated as KG) and ammonia was discovered in pea germs. The object of the present treatise was to investigate further conditions of the process of this reaction in the vegetal organism. The descendent chromatography on paper in phenol "buffered" (zabuferennyy) up to pH 12,0 was applied for this purpose. The method of producing homogenates from germs and roots is described. Table 1 shows the intensity of formation of glutamic acid by aminization and superaminization ("pereaminirovanije") of the a-ketoglutar soid. Hence it results that in the said homogenates an intensive reaction of the fermentative super aminimation takes place with an increase of content of glutamic acid. Thereby the latter is formed from KG in first line at the expense of aspartic acid. Consequently an intensive synthes-

Card 1/3

The Synthesis of Glutamic Acid From a-Ketoglubrate in Plants. 20-3-29/46

is of glutamic acid by a direct aminisation of AJ with ammonia takes place in presence of ammonium. A notice ble increase of serin in homogenate was also essential, in which case the increase was smaller in root homogenates than in such which were produced from whole gorms. Moreover the influence of kegymase and glucose on the said synthesis was verified. The intensification of the aminization process of the KG by ammonia was verified. This points out a close context of the synthesis referred to with oxidating reducing processes in the vegetable cell. Further the influence of the adenosin-triphosphor acid (ATPh) was investigated. In all cases the content of glutamic acid in the homogenat increased. Finally, growing ripe wheat-ears were investigated. Though their content of free glutamic acid is small, the KG aminibation process by ammonia is clearly marked. With the use of a solution of chlorimmonium which was equimolar to the amonium a-ketoglaterate in respect to ammonium, the content of glutamic acid, compared with the control, did not increase. By using sodium a-ketoglutarate, this content has even decreased. It is proved by this that the animization of the a-ketoglutirate add takes place in her germs and growing ripe wheat ears. There are 3 tables and 4 references, 2 of which are Slavic.

Card 2/3

"APPROVED FOR RELEASE: Monday, July 31, 2000

CIA-RDP86-00513R000826420

The Synthesis of Glutamic Acid From a-Ketoglutarate in Mantin 20-5-29/46

ASSOCIATION: Institute of Biochemistry im. A. N. Bakh of AN USSR (Institut

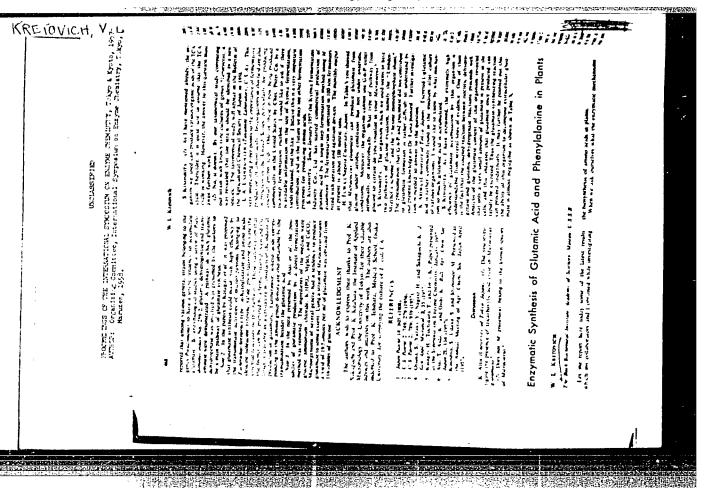
biokhimii im. A. N. Bakha Akademii nauk SSSR)

June 17, 1957 by A. I. Oparin, Adademidian rlaskiTsD:

June 13, 1957 SJUMITTED:

Library of Congress ATAILABLE:

Jard 3/3



KRETOVICH, V. L. and USPENSKAYA, Y. T.

A. N. Bach Institute of Biochemistry, Academy of Sciences, Moscow.

"Biosyntheisis of Phenylalanine in Plants."

paper preesented at Fourth International Congress of Biochemistry, Vienna, Austria 1 - 6 Sep 58.

"Biosynthesis of Alanine in Plants."

report submitted IV Intl. Cong. of Biochemistry, Vienna, 1 - 6 Sep 1958.

KRETOVICH, Vatslav, Leonovich; OPARIN, A.I., akademik, otv.red.; ANTONYUK,
L.D., red.izd-va; SHEVCHENKO, G.B., tekhn.red.

[Biochemistry of grain and bread] Biokhimila zerna i khleba.

Moskva, Izd-vo Akad.nauk SSSR, 1958. 172 p. (MIRA 12:2)

(Grain) (Flour)

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R0008264200

KKETEVICH, VE

AUTHOR:

Hone Given

26-58-2-35/48

TITLE:

Prizes and Medals Awarded by the Academy of Sciences of the

USSR (Premii i medali Akademii nouk SSSR)

FERIODICAL:

Priroda, 1958, Nr 2, pp 113-114 (USSR)

ABSTRACT:

The following awards were made in 1957: the prize imeni D.I. Mendelevev, to Member-Correspondent of the AS USSR. I.A. Aszarnovskiy and Candidate of Chemical Sciences G.F. Nikol'skiy (posthumously) for their work "Discovery and Study of the Ozonides of Alkaline Metals"; the prize imeni A.N. Bakh, to Doctor of Biological Sciences V.L. Kretovich, for his work "Fundamentals of the Biochemistry of Plants"; the prize imeni I.I. Mechnikov. to Doctor of Biological Sciences M.A. Peshkov, for his work "Cytology of Bacteria"; the prize imeni V.L. Komarov, to Doctor of Biological Sciences A.A. Pedorov, Candidates of Biological Sciences M.E. Kirpichnikov, and Z.T. Artyushenko, for their work "Atlas to the Descriptive Morphology of the Higher Flants"; the prize imeni I.P. Pavlov, to Doctor of Medical Sciences A.I. Karamyan, for his work "The Evolution of the Functions of the Cerebellum and the Great Hemispheres of the Cerebrum"; the prize imeni P.P. Anosov, to Doctor of Technical Sciences A.I. Skakov (posthumously),

Card 1/3

Prizes and Medals Awarded by the Academy of Sciences of the MUSE $-26-5^{\circ}-2-75$ (48)

TO A CONTROL OF THE PROPERTY O

for his work "Quality of BR Rails"; the gold medal imeni V.V. Dokuchayev, to Doctor of Agricultural Sciences A.A. Rode for his work "Soil Moisture". Awards were also made to Doctor of Physical-Mathematical Sciences B.K. Vaynshteyn, for his work "Structural Electronography"; Academician G.S. Landsberg (posthumously) and his fellow-workers, for their work "Basic Parameters of the Spectra of the Combination Scattering of Carbohydrates"; Doctor of Physical-Mathematical Sciences K.A. Petrzhak, Candidate of Chemical Sciences M.A. Bak, Candidate of Physical-Mathematical Sciences T.N. Semenyushkin, for their work "Isotope Content of Uranium in Meteorites"; Candidate of Geological and Mineralogical Sciences V.F. Maslov, for "Calcareous Fossil Algae of the USSR"; Candidate of Geographical Sciences N.A. Grave, for "The Conditions and Laws of Development of Strata of Permafrost Rocks in Chukotsko-Koryakskaya Country and in Kamchatka": Doctor of Geographical Sciences L.L. Rossolimo, for "The Temperature Regime of Lake Baykal"; Doctor of Geological and Mineralogical Sciences I.I. Sinzburg, for "Elaboration of the Theoretical Bases of Geochemical Survey Methods"; Academician I.F. Bardin and co-workers, for "The Iron-Ore Basis of Ferrous Metallurgy in the HDMR"; Doctor of Economic Sciences A.Ye. Probst, Candidate of

Card 2/3

"APPROVED FOR RELEASE: Monday, July 31, 2000

CIA-RDP86-00513R000826420

26-50-2-35/48

Prizes and Medals Awarded by the Academy of Sciences of the USGR

Technical Sciences A.I. Aleksandrova, Candidates of Economic Sciences V.B. Prodskiy, A.B. Rozentreter and V.I. Gvsyannikov, for their work "Prospects of Development of Electric Plast Furnace Production in the East of the USSR (Eastern Siberia and the Far East)".

1. Science--Citation--USSR

Card 3/3

THE CONTROL OF THE PROPERTY OF

KRETOVICH, V.L.; POPOV, M.P.; CHELEYRV, D.A.

Interaction of lipase and lipoxidase in the process of fat oxidation. Izv.vys.ucheb.zav.;pishch.tekh. no.5:23-27 '58. (MIRA 11:12)

1. Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti, kafedra biokhimii i zernovedeniya. (Oils and fats, Edible) (Enzymes) (Oxidation)

KRETOVICH, V.L., BUNDELI, A.A., FRASHERI, M.P., BOROVIKOVA, N.V.

· CANALINAMENTALINAMENTALINAMENTALINAMENTALINAMENTALINAMENTALINAMENTALINAMENTALINAMENTALINAMENTALINAMENTALINAM

Competitive inhibition of transamination in plants by hydroxylamine. Zhur.ob. biol. 19 no.5:414-416 S-0 '58 (MIRA 11:10)

1. Institut biokhimii imeni A.N. Bakha AN SSSR.

(PLANTS, EFFECT OF HYDROXYLAMINE ON)

(GLUTAMIC ACID)

(SERINE)

```
Frectionation of glycinin by ultracentrifugation [with summary in English]. Biokhimiia 23 no.1:135-139 Ja-F '58. (MIRA 11:3)

1. Institut biokhimii im. A.N.Bakha AN SSSR, Moskva i Institut vysokomolekulyarnykh soyedineniy AN SSSR, Leningrad. (PROTEINS, determination, glycinin, ultracentrifugation (Rus) (SOI BEAN, same)
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"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826420

RRETOVICH, V.L.

Biosynthesis of dicarboxylic amino acids and enzymatic transformations

of amides in plants [with summary in English]. Izv.AN SSSR Ser. biol. 23 no.2:129-143 Mr-Ap '58. (MIRA 11:4)

1. Institut biokhimii im. A.N.Bakha AN SSSR.
(PLANT PHYSIOLOGY) (NITROGEN METABOLISM)

KRETOVICH, V.L., USPENSKAYA, Zh.V.

mand of the section o

Synthesis of phenylalanine from phenylpyruvic acid in pea seedling homogenates [with summary in English]. Biokhimiia 23 no.2:248-253 Hr-Ap *58 (MIRA 11:6)

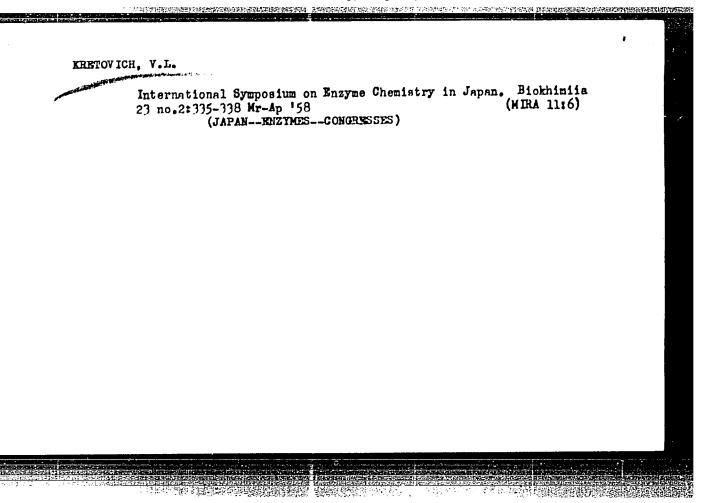
1. Institut biokhimiii imeni A.N. Bakha AN SSSR, Moskva.

(PHENYLALANINE, metabolism

synthesis from phenylpyruvic acid in pea-seedling
homogenates (Rus))

(PHENYLPYRUVIC ACID, metabolism
in phenylalanine synthesis in pea-seedling homogenates
(Rus))

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826420



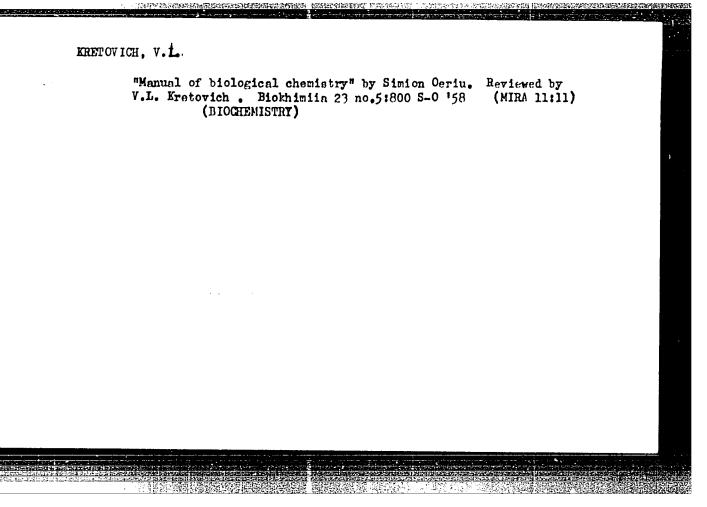
KRETOVICH, V.L.; SMIRNOVA, T.I.; FRENKEL!, S.YA.

Submolecular structure of glycinin and conditions of its reversible association [with summary in English]. Biokhimiia 23 no.4:547-557 J1-Ag '58. (MIRA 12:3)

1. Institute of Biochemistry (Moscow) and Institute of Higher Molecular Compounds (Leningrad), Academy of Sciences of the U.S.S.R., Moscow.

(GLOBULIN, glycinin, submolecular structure in reversible assoc. (Rus))

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R0008264200



KRETOVICH, V.L.; BUNDEL', A.A.; FRASHERI, M.R.; BOROVIKOVA, N.V.

Participation of hydroxylamine in the synthesis of amino acids in plants, Dokl.AN SSSR 122 no.6:1065-1067 0 '58.

(MIRA 11:12)

1. Institut biokhimii imeni A.N. Bakha AN SSSR, Predstavleno akademi-kom Oparinym.

(HYDROXYLAMINE) (AMINO ACIDS)

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826420

17(3) AUTHORS: Kretovich, V. L., Bundel', A. A., 50V/20-122-6-30/49 Frasheri, M. R., Borovikova, N. V. TITLE: On the Participation of Hydroxylamine in the Synthesis of Amino Acids in Plants (Ob uchastii gidroksilamina v sinteze aminokislot v rasteniyakh) Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 6, pp 1065 -PERIODICAL: 1067 (USSR) ABSTRACT: Already in 1884 (Ref 2) and in 1937 (Ref 1), respectively, the opinion was expressed that plants during the assimilation of nitrates form hydroxylamine which in consequence of a later reaction with carbonyl compounds forms oximes. According to this hypothesis oximes are changed by reduction into corresponding amino acids. Thus hydroxylamine together with ammonia, which in theoretical constructions is used as an inorganic initial compound in the synthesis of amino acids, have become important substances. In spite of previous papers dealing with the subject (Refs 3 - 7) the actual participation of hydroxylamine in the synthesis of amino acid by plants has never been demonstrated by experiment. Card 1/3 It was even ascertained that hydroxylamine as an intense

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On the Participation of Hydroxylamine in the Synthesis of Amino Acids in Plants

SOV/20-122-6-30/49

intercellular toxin (kletochnyy yad) delays several processes, especially the reaction of the fermentative transamination (Ref 8). It is quite obvious that the problem of the participation of hydroxylamine investigated has to be discussed mainly with respect to the concentrations applied. The present paper aimed at investigating the participation of hydroxylamine in the synthesis of amino acid in the pulp and extracts of plant tissues. Small leaves of 10 - 12 days old wheat-seedlings and of 20 - 24 days old pumpkin-seedlings were used for this purpose. Table 1 shows the results of the experiments for the explanation of the influence exercised by hydroxylamine upon the synthesis of serine and glutaminic acid in the pumpkin-seedlings. It can be seen from table 1 that in the pulp of small leaves in the presence of hydroxylamine an intense synthesis of the serine and a distinctly marked synthesis of the glutaminic acid take place. In the pulp of wheat-seedlings the synthesis of both amino acids in question could be ascertained. However, the increase in the content of these acids in wheat and in pumpkin was different. It is difficult to explain the cause of this difference.

Card 2/3

"APPROVED FOR RELEASE: Monday, July 31, 2000

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CIA-RDP86-00513R000826420

On the Participation of Hydroxylamine in the Synthesis of Amino Acids in Plants

SOV/20-122-6-30/49

Finally, assumptions on the mechanism of the syntheses

discussed are expressed. There are 1 table and 14 references,

4 of which are Soviet.

ASSOCIATION: Institut biokhimii im. A. N. Bakha Akademii nauk SSSR

(Institute of Biochemistry imeni A. N. Bakh of the Academy of

Sciences, USSR)

PRESENTED: July

July 1, 1958, by A. I. Oparin, Academician

SUBMITTED:

June 30, 1958

Card 3/3

"APPROVED FOR RELEASE: Monday, July 31, 2000

CIA-RDP86-00513R000826420

Tryptophan biosynthesis in the wheat ear. Izv.AN SSSR.Ser.biol.
no.3:428-430 My-Je '59. (MIRA 12:9)

1. The Technological Institute of Food Industry, Moscow.
(WHEAT) (TRYPTOPHAN)

KRETOVICH, V.L.; YEVSTIGNEYEVA, Z.G.; ASEYEVA, K.B.; SAVKHA, I.G.

Nitrogenous substances in the vleeding sap of the pumpkin [with summary in English]. Fiziol.rast. 6 no.1:13-20 Ja-F '59.

(MIRA 12:2)

1. A.N. Bach Institute of Biochemistry of the U.S.S.R. Academy of Sciences, Moscow.

(Pumpkin) (Sap) (Nitrogen)

Biosynthesis of glutamic acid and glutamine in pea and wheat sprouts. Fiziol.rast. 6 no.2:165-170 Mr-Ap '59. (MIRA 12:5)

1. A.N.Bakh Institute of Biochemistry, U.S.S.R. Academy of Sciences, Moscow.

(Glutamic acid) (Glutamine) (Plants--Metabolism)

KRETOVICH, V.L.; USPENSKAYA, Zh.V.

Synthesis of phenylalanine and conversion of phenylpyruvic acid in ripening wheat ears [with summary in English]. Biokhimiia 24 no.1:116-122 Ja-F '59. (MIRA 12:4)

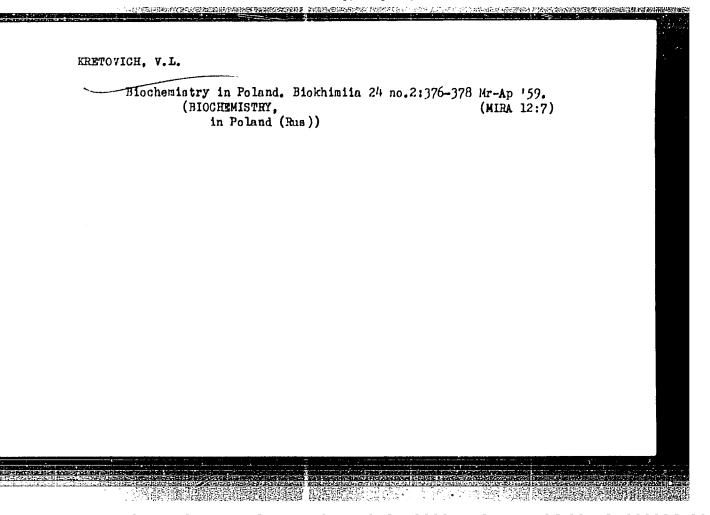
1. Institute of Biochemistry, Academy of Sciences of the U.S.S.R., Moscow.

(ALANINE)

(PYRUVIC ACID)

(WHEAT)

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826420



KRETOVICH, V.L.; KAGAN, Z.S.

Biosynthesis of valine and isoleucine in ripening wheat ears.
Biokhimiia 24 no.4:717-722 Jl-Ag '59. (MIRA 12:11)

1. Institut biokhimii im. A.N.Bakha AN SSSR, Moskva.
(WHEAT) (VALIDE) (ISOLEUCINE)

THE CONTROL OF THE PROPERTY OF

SMIRHOVA, T.I.; POGLAZOV, B.F.; KRETOVICH, V.L.

Amperometric titration of SH-groups in glycinin. Biokhimiia 24 no.4:758-760 J1-Ag '59. (MIRA 12:11)

1. Institut biokhimii im. A.N.Bakha Akademii nauk SSSR, Moskva.
(PROTEINS chem.)
(SULFHYDRYL COMPOUNDS chem.)

YAKOVLEVA, V.I.; KRETOVICH, V.L.

Biosynthesis of glutamic acid in wheat and pea seedling homogenates. Biokhimia 24 no.5:842-849 S-0 '59. (MIRA 13:2)

1. Institut biokhimii imeni A.N. Bakha Akademii nauk SSSR, Moskva. (GLUTANIC ACID) (PLANTS--METABOLISM)

KERTOVICH, V.L.; POLYANOVSKIY, O.L.

Tryptophan synthesis from indolylpyruvic acid in plants. Biokhimia 24 no.6:995-1001 N-D '59. (MIRA 13:5)

1. Technological Institute of Food Industry, Moscow. (TETPTOPHAN metab.) (INDOMS metab.) (PTRUVATES metab.)

(PTRUVATES metab.)

17(3)

Kretovich, V. L., Galyas, E. AUTHORS:

SOV/20-124-1-62/69

TITLE:

Synthesis of Amino Acids From Oxalacetic Acid in Sprout Extracts (Sintez aminokislot iz shchavelevouksusnoy kisloty v ekstrak-

takh iz prorostkov)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 1,

pp 217 - 219 (USSR)

ABSTRACT:

It is the aim of the present paper to investigate more thoroughly by quantitative chromatography the already earlier (Ref 1) proved synthesis of aspartic acid in homogenates from plant tissues in the presence of oxalacetic acid. This method permits the simultaneous determination of the fluctuations of the content of other amino acids, 8 - 9 days old wheat and barley sprous were used in the experiments. Asparagine was photometrically determined by extraction (leaching out) of the spots with aqueous isopropanol (1:1). Table 1 gives the results. Herefrom can be seen that an energetic synthesis takes place in the extracts from the sprouts, as mentioned in the title. The maximum is 300% as compared to the control (water = 100%). Thus, no doubt is left that oxalacetic acid

Card 1/3

THE STORY OF THE PROPERTY OF T

Synthesis of Amino Acids From Oxalacetic Acid in Germ SOV/20-124-1-62/69

is a nitrogen-free precursor of aspartic acid in plants. At the same time a still more energetic synthesis of alanine takes place. Alanine is formed as a result of amination of pyruvate which in turn is formed by decamboxylation of oxalacetic acid. Asparagine, glutamine, y-amino butyric acid and serine are consumed in the synthesis of a partic acid and alanine. They are required in the transamination process. Glutamic acid was only consumed in the barley germs. Thus, the mentioned synthesis takes place by transamination of oxalacetic acid and pyruvic acid. In this connection asparamine and glutamine play an important part as sources of amino groups. The authors refer to a number of still unemphasize the points still to be clarified. There are 1 table and 12 references, 8 of which are Soviet.

ASSOCIATION!

Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti (Moscow Technological Institute of Food Industry)

Card 2/3

17(3)AUTHORS:

Kretovich, V. L., Yakovleva, V. I.

507/20-125-1-58/67

TITLE:

Biosynthesis of Glutamic Acid and Glutamine in a Ripening Wheat Ear (Biosintez glyutaminovoy kisloty i glyutamina v

sozrevayushchem kolose psheritsy)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 1, pp 210-212

(USSR)

ABSTRACT:

The authors proved that the transformations of the two substances mentioned in the title proceed in the live tissues of the germs in a completely different way as compared to the homogenates. For the experiment ears of the wheat type "Ozimaya 2453" (winter wheat 2453) were used in the stage of "lactic ripening". The ears absorbed by means of the transpiration flow 0.05 M solution of ammonium or potassium salt of the & -glutario acid. The method was the same as described by references 2, 3 with some modifications. Table 1 shows the determinations of amino acids and amides in the experimental ears. Thus, it is revealed that inspite of several differences which may be due to the different ripeness of the ears and the varying weather conditions, perfectly obvious results were obtained. In connection with the introduction of the mentioned

Card 1/4

CIA-RDP86-00513R000826420(**APPROVED FOR RELEASE: Monday, July 31, 2000**

Biosynthesis of Glutamic Acid and Glutamine in a Ripening Wheat Ear

SOV/20-125-1-58/67

salts into the ear an intensive synthesis of glutamic acid takes place. In 3-hour-samples no transamination takes place but also a reductive amination of the & -ketoglutaric acid by the ammonium ion. In consequence of the introduction of of opotassium ketoglutarate much less glutamic acid is formed as compared with the ammonium salt of the same soid. In the case of an introduction of equipolar amounts of ammonium ions into the ears in the form of phosphate a certain synthesis of glutamic acid and an intensive glutamine synthesis take place. In this case glotamine is the compound which destroys the ammorium ions penetrating the ear. What is obvious is the accumulation of yearing butyric acid in the samples with & -potassium ketoglutarate, especially in the case of an exposition of 10 hours' duration. This takes apparently place under the action of glutamine decarboxylase (Ref 5) which "carries off" the glutamic acid. Towards the tenth hour as a rule the content of glutamic acid, serine and alanine decreases. They are apparently consumed in connection with the protein synthesis. In contrast to this the content of aspartic acid increases as that time by several times its amount. It is probably less rapidly consumed

Card 2/4

Biosynthesis of Glutamic Acid and Glutamine in a Ripening Wheat Ear

sov/20-125-1-58/67

than the other amino acids. The results obtained prove that the character of transamination in ripening ears deviates from that in homogenates where aspartic acid disappears completely, while serine and alanine are consumed to a considerable extent. In this connection a new confirmation was established of the fact that glutamine plays a particular part (Refs 6, 7) as a very unstable substance in connection with the binding of the running in ammonia (beside glutamic acid) and the transference of the amino groups to the keto acids during transamination. Further, it became obvious that in the ripening ears a very close connection exists between the metabolism of glutamic acid, glutamine and x-aminobutyric acid. This interaction is explained by means of a scheme. The data given by the authors are in accordance with those of reference 8. There are 1 table and 8 references, 5 of which are Soviet.

ASSOCIATION: Institut biokhimii im. A. N. Bakha Akademii nauk SSSR (Institute of Biochemistry imeni A. N. Bakh of the Academy of Sciences, USSR)

Card 3/4

POHOMAREVA, A.H.; KRETOVICH, V.L.

Quantitative determination of free amino acids in grain and flour. Izv.vys.ucheb.zav.; pishch.tekh. no.1:132-134 '60.
(MIRA 13:6)

1. Kafedra biokhimii i zernovedeniya Moskovskogo tekhnologicheskogo instituta pishchevoy promyshlennosti. (Amino acids)

KRETOVICH, V.L.; YAKOVLEVA, V.I.

Biosynthetic production of glutamic acid. Izv. AN SSSR. Ser. biol. no.2:197-205 Mr-Ap '60. (MIRA 13:6)

1. Institute of Biochemistry, Academy of Sciences of the U.S.S.R., Moscow.

(GLUTANIC ACID) (BIOSYPTHESIS)

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KRETOVICH, V.L.; PROKHOROVA, A.P.

Biochemical characteristics of grain possessing different flavors. Izv. AN SSSR. Ser. biol. no.3:446-450 My-Je '60. (MIRA 13:7)

1. Institute of Biochemistry, Academy of Sciences of the U.S.S.R., Moscow.

(GRAIN-ANALYSIS AND CHEMISTRY)